

Supplementary Material to “An efficient *Agrobacterium tumefaciens*-mediated transformation method for *Simplicillium subtropicum* (Hypocreales: Cordycipitaceae)”

Supplementary Data S1 - Alignment of ITS sequences used to generate de *Simplicillium* species tree.

Supplementary Material 1

>NR_119828.1 [Bionectria] vesiculosa HMAS 183151 ITS region; from TYPE material

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-----TTCCGTTGGTGAACCAGCGTATCATTACT-GAGTA-CAACTCCCACCCA-TGTGAAC--  
ACC----A-GTT-GCTTCGGCG--GTC--CCG-----CGGATCCAGGCG-C-----CAACTC-----  
-----CGAGT-CTGAG-----  
TAATCAAAACTTCAACAACGGATCTTGGTCTGGCATCGATGAAGAACGCAGCGAAATGCGAAAA  
GTAATGTGAATTGCAGAATTCACTGAATCATCGAATCTTGAACGCACATTGCGCCCGCCAGCATTCTG  
GCGGGCATGCCTGTCTGAGCGTCATTCACCCCTCACT---TT-GGCGTTGGGGATCGGC-----  
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CCGGCCCCGAAATATACTGGCGGACCCGCTGTGGCCTCCTCGAAGTAG---CCGCACCGG-A-A-  
GCAGCGAGCCCCTGCGTAAACCCCCCAAT-----  
AAGGTTGACCTCAGATCAGGTAGGAATACCCGCTGAACCTAA-----  
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>NR_077207.1 Trichoderma atroviride NBRC 101776 ITS region; from synonym TYPE material

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-----TTCCGTTGGTGAACCAGCGGATCATTACC-GAGTA-CAACTCCCACCCAATGTGAAC--  
-ACC----ATGTT-GCCTCGGCG--GTCACCCG-----CGCA--CGGAACCAGGCG-C-GACC--AAACTC-----  
---GTCCCCCTCGCGGACGTTATTTC-----CTGAG-----  
ATGAATCAAAACTTCAACAACGGATCTTGGTCTGGCATCGATGAAGAACGCAGCGAAATGCGATA  
AGTAATGTGAATTGCAGAATTCACTGAATCATCGAATCTTGAACGCACATTGCGCCCGCCAGTATTCT  
GGCAGGGCATGCCTGTCCGAGCGTCATTCACCCCTCGAA---GTCGGCGTTGGGA---C-----  
-----GAG-----  
GATCCCGGCCCCGAAATACAGTGGCGGTCTGCCGCAGCCTCTCGCAGTAGTGC-TCGCACCGG-  
G-GCGCGCGCGTCCACGCCGTAAAACACCCAAAC-----  
AATGTTGACCTCGGATCAGGTAGGAATACCCGCTGAACCTAA-----  
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>AJ292397.1 Verticillium chlamydosporium var. chlamydosporium partial 18S rRNA gene, internal transcribed spacer 1 (ITS1), 5.8S rRNA gene, internal transcribed spacer 2 (ITS2) and partial 28S rRNA gene, strain CBS 103.65

-----ATTACC-GAGTT-CAACTCCCACCCATGTGAACCTTAC--
TTACACGTT-GCTTCGGCG--GTCCTCCG-----CGGAACCAGGCGGC-----AAACTC-----
-----G-----CTGAGTGG-----
ATGAATCAAACATTCAACAACGGATCTCTGGTTCTGGCATCGATGAAGAACGCAGCGAAATGCGATA
AGTAATGTGAATTGCAGAATTCACTGAGTGAATCATCGAATCTTGAACGCACATTGCGCCGCCAGTATTCT
GGCGGGCATGCCTGTTGAGCGTCATTCAACCCCTCAAG---TT-
GGTGTGGGGACCGCGAGTACAGAGGTTGGGGACTTGTCCTCC-----
-----CCGCCCCCGAAATGAATTGGCGGTCTCGTCGCGGCCCTCTGCGTAGTAG----
TCGCATCAG-G-GCGCGGCCACTCCGTAAAACGCCAAC----
TTTAAGAGTTGACCTCGAACATCAGGTAGGAATACCCG-----

>AB603997.1 Simplicillium cylindrosporum genes for 18S rRNA, ITS1, 5.8S rRNA, ITS2, 28S rRNA, partial and complete sequence, strain: JCM 18171

-----TCCGTAGGTGAACCTGCGGATCATTATC-GAGTATCAACTCCC-CCCTATGTGAAC--
---CTTTA--TGTT-GCTTCGGCG--GTCGC---T---GC-----CGGGACCACGCG-T-----AAACTC--CGAAA--
-----TCTGAGTGG---
CAATGAATCAAACATTCAACAACGGATCTCTGGTTCTGGCATCGATGAAGAACGCAGCGAAATGCG
ATAAGTAATGTGAATTGCAGAATTCACTGAGTGAATCATCGAATCTTGAACGCACATTGCGCCGCCAGCAT
TCTGGCGGGCATGCCTGTTGAGCGTCATTCAACCCCTGAGGAGATC-GGTGTGGGGACCCGGC-----
-----GACTTCTG-----CCGGCCCCGAAATTCACTGCGGG-
CCCGTTGCGGCGACCTCTGCGTAGTAA---TCGCACTGG-G-
CAGCATCGCGGCCACGCCGTAAAACCCCGAC-----
AAGGTTGACCTCGAACATCAGGTAGGACTACCCGCTGAACCTAACGATATCAAT--CGGAGG-----

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>AB603998.1 Simplicillium cylindrosporum genes for 18S rRNA, ITS1, 5.8S rRNA, ITS2, 28S rRNA, partial and complete sequence, strain: JCM 18172

-----GAACCTGCGGATCATTATC-GAGTATCAACTCCC-CCCTATGTGAAC----
CTTTA--TGTT-GCTTCGGCG--GTCGC---T---GC-----CGGGACCACGCG-T-----AAACTC--CGAAA----
-----TCTGAGTGG---
CAATGAATCAAACATTCAACAACGGATCTCTGGTTCTGGCATCGATGAAGAACGCAGCGAAATGCG
ATAAGTAATGTGAATTGCAGAATTCACTGAGTGAATCATCGAATCTTGAACGCACATTGCGCCGCCAGCAT

TCTGGCGGGCATGCCCTGTCAGCGTCATTCAACCCTCGAGGAGATC-GGTGTTGGGACCCGGC-----
-----GACTTCTG-----CCGGCCCCGAAATTCACTGGCGG-
CCCGTTGCGGCACCTCTCGTAGTAA---TCGCACTGG-G-
CAGCATCGCGGCCACGCCGTAAAACCCCGAC-----
AAGGTTGACCTCGAATCAGGTAGGACTACCCGCTGAACCTAACGATATCAAT--CGGAGG-----

>AB604006.1 Simplicillium cylindrosporum genes for 18S rRNA, ITS1, 5.8S rRNA, ITS2, 28S
rRNA, partial and complete sequence, strain: JCM 18175

-----TCCGTAGGTGAACCTCGGGATCATTATC-GAGTATCAACTCCC-CCCTATGTGAAC--
---CTTTA--TGTT-GCTTCGGCG--GTCGC---T---GC-----CGGGACCACGCG-T-----AAACTC--CGAAA--
-----TCTGAGTGG---
CAATGAATCAAACCAACGGATCTTGGTTCTGGCATCGATGAAGAACGCAGCGAAATGCG
ATAAGTAATGTGAATTGCAGAATTCACTGAATCATCGAACATTGCGCCCGCCAGCAT
TCTGGCGGGCATGCCCTGTCAGCGTCATTCAACCCTCGAGGAGATC-GGTGTTGGGACCCGGC-----
-----GACTTCTG-----CCGGCCCCGAAATTCACTGGCGG-
CCCGTTGCGGCACCTCTCGTAGTAA---TCGCACTGG-G-
CAGCATCGCGGCCACGCCGTAAAACCCCGAC-----
AAGGTTGACCTCGAATCAGGTAGGACTACCCGCTGAACCTAACGATATCAAT-ACGGAGG-----

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>AB604005.1 Simplicillium cylindrosporum genes for 18S rRNA, ITS1, 5.8S rRNA, ITS2, 28S
rRNA, partial and complete sequence, strain: JCM 18174

-----TCCGTAGGTGAACCTCGGGATCATTATC-GAGTATCAACTCCC-CCCTATGTGAAC--
---CTTTA--TGTT-GCTTCGGCG--GTCGC---T---GC-----CGGGACCACGCG-T-----AAACTC--CGAAA--
-----TCTGAGTGG---
CAATGAATCAAACCAACGGATCTTGGTTCTGGCATCGATGAAGAACGCAGCGAAATGCG
ATAAGTAATGTGAATTGCAGAATTCACTGAATCATCGAACATTGCGCCCGCCAGCAT
TCTGGCGGGCATGCCCTGTCAGCGTCATTCAACCCTCGAGGAGATC-GGTGTTGGGACCCGGC-----
-----GACTTCTG-----CCGGCCCCGAAATTCACTGGCGG-
CCCGTTGCGGCACCTCTCGTAGTAA---TCGCACTGG-G-
CAGCATCGCGGCCACGCCGTAAAACCCCGAC-----
AAGGTTGACCTCGAATCAGGTAGGACTACCCGCTGAACCTAACGATATCAAT-ACGGAGG-----

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>AB603994.1 Simplicillium cylindrosporum genes for 18S rRNA, ITS1, 5.8S rRNA, ITS2, 28S rRNA, partial and complete sequence, strain: JCM 18170

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>AB603999.1 Simplicillium cylindrosporum genes for 18S rRNA, ITS1, 5.8S rRNA, ITS2, 28S rRNA, partial and complete sequence, strain: JCM 18173

-----CCGTAGGGTAACTCGCGATCATTATC-GAGTATCAACTCCC-CCCTATGTGAAC-----
--CTTTA-TGTT-GCTTCGGCG-GTCGC---T----GC-----CGGGACCACGCG-T-----AAACTC--CGAAA-----
-----TCTGAGTGG---
CAATGAATCAAAACTTCAACAACGGATCTTGGTTCTGGCATCGATGAAGAACGCAGCGAAATGCG
ATAAGTAATGTGAATTGCAGAATTCACTGAGTCATCGAATCTTGAACGCACATTGCGCCGCCAGCAT
TCTGGCGGGCATGCCCTGTTGGAGCGTCATTCAACCCTCGAGGGAGATC-GGTGTTGGGACCCGGC-----
-----GACTTCTG-----CCGGCCCCGAAATTCACTGGCGG-----
CCCGTTGCGGCGACCTCTGCGTAGTAA---TCGCAGTGG-G-
CAGCATCGCGGCCACGCCGTAAAACCCCCGAC-----
AACGTTGACCTCCAATCACGTACCGACTACCCCGTCACTTAACCGATATCAAT CCCAGC

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>AB603989.1 Simplicillium cylindrosporum genes for 18S rRNA, ITS1, 5.8S rRNA, ITS2, 28S rRNA, partial and complete sequence, strain: JCM 18169

-----ACCTGCGGATCATTATC-GAGTATCAACTCCC-CCCTATGTGAAC-----
CTTTA--TGTT-GCTTCGGCG--GTCGC---T----GC-----CGGGACCACGCG-T-----AAACTC-CGAAA-----
-----TCTGAGTGG---
CAATGAATCAAAACTTCAACAACGGATCTTGGTTCTGGCATCGATGAAGAACGCAGCGAAATGCG
ATAAGTAATGTGAATTGCAGAATTCACTGAATCATCGAATCTTGAACGCACATTGCGCCCCGCCAGCAT
TCTGGCGGGCATGCCCTGTTGGAGCGTCATTCACCCCTCGAGGGAGATC-GGTGTTGGGACCCGGC-----
-----GACTTCTG-----CCGGCCCCGAAATTCACTGGCGG-
CCCGTTGCGGCGACCTCTGCGTAGTAA---TCGCACCTGG-G-
CAGCATCGCGGCCACGCCGTAAAACCCCCGAC-----

AAGGTTGACCTCGAATCAGGTAGGACTACCCGCTGAACTTAACATCAAT-----

>AB603991.1 Simplicillium minatense genes for 18S rRNA, ITS1, 5.8S rRNA, ITS2, 28S rRNA, partial and complete sequence, strain: JCM 18177

-----GAACCTGCGGATCATTATC-GAGTATCAACTCCC-CCCTTGTGAAC----
CTTTA--TGTT-GCTTCGGCG--GTCGC---T----GC-----CGGGACCACGCG-T-----AAACTC--CGAAA----
-----TCTGAGTGG---
CAATGAATCAAAACTTCAACAACGGATCTTGGTTCTGGCATCGATGAAGAACGCAGCGAAATGCG
ATAAGTAATGTGAATTGCAGAATTCACTGAATCATCGAATCTTGAACGCACATTGCGCCGCCAGCAT
TCTGGCGGGCATGCCTGTTGAGCGTCATTCAACCCCTGAGGAGATC-GGTGTTGGGACCCGGC----
-----GACTTCTG-----CCGGCCCCGAAATTCAAGTGGCGG-
CCCGTTGCGGCGACCTCTGCGTAGTAA---TCGCACTGG-G-
CAGCATCGTGGCCACGCCGTAAAACCCCCGAC-----
AAGGTTGACCTCGAATCAGGTAGGACTACCCGCTGAACTTAACATCAAT--CGGAGG-----

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>AB603992.1 Simplicillium minatense genes for 18S rRNA, ITS1, 5.8S rRNA, ITS2, 28S rRNA, partial and complete sequence, strain: JCM 18176

-----GAACCTGCGGATCATTATC-GAGTATCAACTCCC-CCCTTGTGAAC----
CTTTA--TGTT-GCTTCGGCG--GTCGC---T----GC-----CGGGACCACGCG-T-----AAACTC--CGAAA----
-----TCTGAGTGG---
CAATGAATCAAAACTTCAACAACGGATCTTGGTTCTGGCATCGATGAAGAACGCAGCGAAATGCG
ATAAGTAATGTGAATTGCAGAATTCACTGAATCATCGAATCTTGAACGCACATTGCGCCGCCAGCAT
TCTGGCGGGCATGCCTGTTGAGCGTCATTCAACCCCTGAGGAGATC-GGTGTTGGGACCCGGC----
-----GACTTCTG-----CCGGCCCCGAAATTCAAGTGGCGG-
CCCGTTGCGGCGACCTCTGCGTAGTAA---TCGCACTGG-G-
CAGCATCGTGGCCACGCCGTAAAACCCCCGAC-T-----
AAGGTTGACCTCGAATCAGGTAGGACTACCCGCTGAACTTAACATCAAT--CGGAGG-----

>AB603993.1 Simplicillium minatense genes for 18S rRNA, ITS1, 5.8S rRNA, ITS2, 28S rRNA, partial and complete sequence, strain: JCM 18178

-----GAACCTGCGGATCATTATC-GAGTATCAACTCCC-CCCTTGTGAAC----
CTTTA--TGTT-GCTTCGGCG--GTCGC---T----GC-----CGGGACCACGCG-T-----AAACTC--CGAAA----
-----TCTGAGTGG---

>AJ292396.1 Cephalosporium lanoso-niveum partial 18S rRNA gene, internal transcribed spacer 1 (ITS1), 5.8S rRNA gene, internal transcribed spacer 2 (ITS2) and partial 28S rRNA gene, strain CBS 704.86

-----ATTATC-GAGTATCAACTCCC-CCCTATGTGAAC----CTTTA--
TGTT-GCTTCGGCG--GTCGC---T----GC-----CGGGACCACGCG-T-----AAACTC--CGAAA-----
-----TCTGAGTGG---
CAATGAATCAAAACTTCAACAACGGATCTTGGTTCTGGCATCGATGAAGAACGCAGCGAAATGCG
ATAAGTAATGTGAATTGAGAATTCACTGATGAATCATCGAATCTTGAACGCACATTGCGCCGCCAGCAT
TCTGGCGGGCATGCCTGTTGAGCGTCATTCAACCCTGAGGAGATC-GGTGTTGGGACCCGGC-----
-----GACTCTT-----CCGGCCCCGAAATTCACTGGCGG-
CCCGTTGCGGCGACCTCTGCGTAGTAA---TCGCACCGGTA-
CAGCATCGTGGCACGCCGTAAAACCCCCGAC-----
AAGGTTGACCTCGAATCAGGTTAGGAATACCCG-----

>EF641862.1 Simplicillium lanosoniveum strain CBS 962.72 18S ribosomal RNA gene, partial sequence; internal transcribed spacer 1, 5.8S ribosomal RNA gene, and internal transcribed spacer 2, complete sequence; and 28S ribosomal RNA gene, partial sequence

-----ACTATTATCTGAGTATCAACTCCC-CCCTATGTGAAC----CTTTA--
TGTTTGCTTCGGCG--GTCGC---T---GC-----CGGGACCACGCG-T-----AAACTC--CGAAA-----
-----TCTGAGTGG---
CAATGAATCAAAACTTCAACAACGGATCTTGGTTCTGGCATCGATGAAGAACGCAGCGAAATGCG
ATAAGTAATGTGAATTGCAGAATTCACTGATCATCGAATCTTGAACGCACATTGCGCCGCCAGCAT
TCTGGCGGGCATGCCTGTTGAGCGTCATTCAACCCTCGAGGGAGATC-GGTGTTGGGACCCGGC-----
-----GACTCTG-----CCGGCCCCGAAATTCACTGAGCGG-
CCCGTTGCGGCGACCTCTGCGTAGTAA---TCGCACCGGTA-
CAGCATCGTGGCACGCCGTAAAACCCCCGAC-----AAGGTTGACCTCGAATCAGGTA-
GACTACCCGCTGA-----CAT

>AB604001.1 Simplicillium subtropicum genes for 18S rRNA, ITS1, 5.8S rRNA, ITS2, 28S rRNA, partial and complete sequence, strain: JCM 18183

-----TCCGTAGGTGAAACCTCGGGATCATTATC-GAGTATCAACTCCC-CCCTATGTGAAC--
---CTTTA--TGTT-GCTTCGGCG--GTCGC---T----GC-----CGGGACCACGCG-T-----AAACTC--CGAAA--
-----TCTGAGTGG---
CAATGAATCAAAACTTCAACAACGGATCTTGGTTCTGGCATCGATGAAGAACGCAGCGAAATGCG
ATAAGTAATGTGAATTGCAGAATTCACTGAATCATCGAATCTTGAACGCACATTGCGCCCCGCCAGCAT
TCTGGCGGGCATGCCTGTTGAGCGTCATTCAACCCCTGAGGAGATC-GGTGTTGGGACCCGGC-----
-----GAUTCACG-----CCGGCCCCGAAATTCACTGGCGG-
CCCGTTGCGGCGACCTCTGCGTAGTAA---TCGCACTGG-G-
CAGCAGCGCGGCCACGCCGTAAAACCCCGAC-----
AAGGTTGACCTCGAATCAGGTAGGACTACCCGCTGAACCTAACATATCAAT--CGGAGG-----

>AB603996.1 Simplicillium subtropicum genes for 18S rRNA, ITS1, 5.8S rRNA, ITS2, 28S rRNA, partial and complete sequence, strain: JCM 18182

-----TCCGTAGGTGAAACCTCGGGATCATTATC-GAGTATCAACTCCC-CCCTATGTGAAC--
---CTTTA--TGTT-GCTTCGGCG--GTCGC---T----GC-----CGGGACCACGCG-T-----AAACTC--CGAAA--
-----TCTGAGTGG---
CAATGAATCAAAACTTCAACAACGGATCTTGGTTCTGGCATCGATGAAGAACGCAGCGAAATGCG
ATAAGTAATGTGAATTGCAGAATTCACTGAATCATCGAATCTTGAACGCACATTGCGCCCCGCCAGCAT
TCTGGCGGGCATGCCTGTTGAGCGTCATTCAACCCCTGAGGAGATC-GGTGTTGGGACCCGGC-----
-----GAUTCACG-----CCGGCCCCGAAATTCACTGGCGG-
CCCGTTGCGGCGACCTCTGCGTAGTAA---TCGCACTGG-G-
CAGCAGCGCGGCCACGCCGTAAAACCCCGAC-----
AAGGTTGACCTCGAATCAGGTAGGACTACCCGCTGAACCTAACATATCAAT--CGGAGG-----

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>AB603995.1 Simplicillium subtropicum genes for 18S rRNA, ITS1, 5.8S rRNA, ITS2, 28S rRNA, partial and complete sequence, strain: JCM 18181

-----GAACCTCGGGATCATTATC-GAGTATCAACTCCC-CCCTATGTGAAC----
CTTTA--TGTT-GCTTCGGCG--GTCGC---T----GC-----CGGGACCACGCG-T-----AAACTC--CGAAA----
-----TCTGAGTGG---
CAATGAATCAAAACTTCAACAACGGATCTTGGTTCTGGCATCGATGAAGAACGCAGCGAAATGCG
ATAAGTAATGTGAATTGCAGAATTCACTGAATCATCGAATCTTGAACGCACATTGCGCCCCGCCAGCAT
TCTGGCGGGCATGCCTGTTGAGCGTCATTCAACCCCTGAGGAGATC-GGTGTTGGGACCCGGC-----
-----GAUTCACG-----CCGGCCCCGAAATTCACTGGCGG-

CCCGTTGGCGACCTCTGCGTAGTAA---TCGCACTGG-G-
CAGCAGCGCGGCCACGCCGTAAAACCCCCGAC-----
AAGGTTGACCTCGAACGAGTAGGACTACCCGCTGAACCTAACGATATCAAT--CGGAGG-----

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>SIMP

TGGAAGTAAAGTCATAACAAGGTTCCGGTGGTAACCAGCGGATCATTATC-GAGTATCAACTCCC-
CCCTATGTGAAC----CTTA-TGTT-GCTTCGGCG--GTCGC---TC---GC-----CGGGACCACGCG-T-----
AAACTC-CGAAA-----TCTGAGTGG---
CAATGAATCAAACCTTCAACAACGGATCTTGGTCTGGCATCGATGAAGAACGCAGCGAAATGCG
ATAAGTAATGTGAATTGCAGAATTCACTGAATCATGAATCTTGAACGCACATTGCGCCGCCAGCAT
TCTGGCGGGCATGCCCTGTTGAGCGTCATTCAACCCTCGAGGGAGATC-GGTGTTGGGATCCGGC-----
-----GGACTCACG-T-----CCGGTCCCGAAATTCACTGGCGG-
CCCGTTGCGGCGACCTCTGCGTAGTAA---TCGCACTGG-G-
CAGCAGCGCGGCCACGCCGTAAAACCCCCGAC-----
AAGGTTGACCTCGAACAGGTAGGACTACCCGCTGAACCTAACGATATCAATN-CGGAGG-----

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>AB603990.1 Simplicillium subtropicum genes for 18S rRNA, ITS1, 5.8S rRNA, ITS2, 28S rRNA, partial and complete sequence, strain: JCM 18180

-----CTGCGGATCATTATC-GAGTATCAACTCCC-CCCTATGTGAAC----
CTTTA--TGTT-GCTTCGGCG--GTCGC---T----GC-----CGGGACCACGCG-T-----AAACTC--CGAAA-----
-----TCTGAGTGG---
CAATGAATCAAACATTCAACAACGGATCTCTGGTCTGGCATCGATGAAGAACGCAGCGAAATGCG
ATAAGTAATGTGAATTGCAGAACATTCACTGAATCATCGAATCTTGAACGCACATTGCGCCCCGCCAGCAT
TCTGGCGGGCATGCCTGTTGAGCGTCAATTCAACCCCTGAGGAGATC-GGTGTTGGACCCGGC-----
-----GACTCACG-----CCGGCCCCGAAATTCACTGGCGG-
CCCGTTGCGGCGACCTCTGCGTAGTAA---TCGCACTGG-G-
CAGCAGCGCGGCCACGCCGTAAAACCCCCGAC-----
AAGGTTGACCTCGAATCAGGTAGGACTACCCGCTGAACCTAACGATATCAAT-----

>AB604000.1 Simplicillium obclavatum genes for 18S rRNA, ITS1, 5.8S rRNA, ITS2, 28S rRNA, partial and complete sequence, strain: ICM 18179

-----TCCGTAGGTGAACTGCGGATCATTATC-GAGTATCAACTCCC-CCCTTTGTGAAC-----
--CTTTA--TGTT-GCTTCGGCG--GACGC---T----GC-----CGGGACCACGCG-C-----AAACTC--CGAAA--

-----TCTGAGTGG--
ACAATGAATCAAACATTCAACAACGGATCTCTGGTCTGGCATCGATGAAGAACGCAGCGAAATGC
GATAAGTAATGTGAATTGCAGAATTCACTGAATCATCGAATCTTGAAACGCACATTGCGCCGCCAGCA
TTCTGGCGGGCATGCCTGTCAGCGTCATTCAACCCCTGAGGAGATC-GGTGTTGGGACCCGGC-----
-----GACTTTAGT-----CCGGTCCTGAAATTCACTGGCGG-
CCCGTTGCGGCGACCTCTGCGTAGTAA---TCGCACTGG-G-
CAGCAGCGCGGCCACGCCGTAAAACCCCCGAC---T---
AAGGTTGACCTCGAATCAGGTAGGACTACCCGCTGAACCTAACGATATCAAT-----

>AJ292394.1 Acremonium obclavatum partial 18S rRNA gene, internal transcribed spacer 1 (ITS1), 5.8S rRNA gene, internal transcribed spacer 2 (ITS2) and partial 28S rRNA gene, strain CBS 311.74

-----ATTATC-GAGTATCAACTCCC-CCCTTGTAAC----CTTTA--
TGTT-GCTTCGGCG--GACGC---T---GC-----CGGGACCACGCG-C-----AAACTC--CGAAA-----
-----TCTGAGTGG---
CAATGAATCAAACATTCAACAACGGATCTCTGGTCTGGCATCGATGAAGAACGCAGCGAAATGCG
ATAAGTAATGTGAATTGCAGAATTCACTGAATCATCGAATCTTGAAACGCACATTGCGCCGCCAGCAT
TCTGGCGGGCATGCCTGTCAGCGTCATTCAACCCCTGAGGAGATC-GGTGTTGGGACCCGGC-----
-----GACTTTAGT-----CCGGTCCCAGAAATTCACTGGCGG-
CCCGTTGCGGCGACCTCTGCGTAGTAA---TCGCACTGG-G-
CAGCAGCGCGGCCACGCCGTAAAACCCCCGAC---T---
AAGGTTGACCTCGAATCAGGTAGGACTACCCG-----

>AB604002.1 Simplicillium aogashimaense genes for 18S rRNA, ITS1, 5.8S rRNA, ITS2, 28S rRNA, partial and complete sequence, strain: JCM 18167

-----GAACCTGCGGATCATTATC-GAGTA-CAACTCCC-CCCTATGTGAAC----
CTTTA--TGTT-GCTTCGGCG--GTCGC-----GC-----CGGGACCACGCG-C-----AAACTC--CGAAA-----
-----TCTGAGTGG---
CAATGAATCAAACATTCAACAACGGATCTCTGGTCTGGCATCGATGAAGAACGCAGCGAAATGCG
ATAAGTAATGTGAATTGCAGAATTCACTGAATCATCGAATCTTGAAACGCACATTGCGCCGCCAGCAT
TCTGGCGGGCATGCCTGTCAGCGTCATTCAACCCCTGAGGAGATC-GGTGTTGGGACCCGGC-----
-----AGCGGACCCAG-----
CCGGCCCCGAAATTCACTGGCGG-CCGTTGCGGCGACCTCTGCGTAGTAA---TCGCACTGG-A-
GAGCAGCGCGGCCACGCCGTAAAACCCCCGAC-----
AAGGTTGACCTCGAATCAGGTAGGACTACCCGCTGAACCTAACGATATCAAT-----

>AB604004.1 Simplicillium aogashimaense genes for 18S rRNA, ITS1, 5.8S rRNA, ITS2, 28S rRNA, partial and complete sequence, strain: JCM 18168

-----ACCTGCGGATCATTATC-GAGTA-CAACTCCC-CCCTATGTGAAC----
CTTTA--TGTT-GCTCGGGCG--GTCGC-----GC-----CGGGACCACGCG-C-----AAACTC--CGAAA----
-----TCTGAGTGG---
CAATGAATCAAAACTTCAACAACGGATCTTGGTTCTGGCATCGATGAAGAACGCAGCGAAATGCG
ATAAGTAATGTGAATTGCAGAATTCACTGAATCATCGAATCTTGAACGCACATTGCGCCCCGCCAGCAT
TCTGGCGGGCATGCCTGTTGAGCGTCATTCAACCCCTGAGGAGATC-GGTGTTGGGACCCGGC-----
-----AGCGGACCCAG-----
CCGGCCCCGAAATTCACTGGCGG-CCCGTTGCGGCGACCTCTGCGTAGTAA---TCGCAGTGG-A-
GAGCAGCGCGGCCACGCCGTAAAACCCCCGAC-----
AAGGTTGACCTCGAATCAGGTAGGACTACCCGCTGAACCTAACGATATCAAT--CGGAGG-----

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>AB604003.1 Simplicillium sympodiophorum genes for 18S rRNA, ITS1, 5.8S rRNA, ITS2, 28S rRNA, partial and complete sequence, strain: JCM 18184

-----TCCGTAGGTGAACCTGCGGATCATTAAAC-GAG-ATCAACTCCCACCCATGTGAAC--
ACC--TTA--CGTT-GCTCGGGCG-TG-CGC-----TGCTCC---GGGCA---AACGCG-CA-----AAACTC--
CGAAA-----TCTGAGTGG-----
CAATGAATCAAAACTTCAACAACGGATCTTGGTTCTGGCATCGATGAAGAACGCAGCAAATGCGA
TAAGTAATGTGAATTGCAGAATTCACTGAATCATCGAATCTTGAACGCACATTGCGCCCCGCCAGCAT
CTGGCGGGCATGCCTGTTGAGCGTCATTCAACCCCTGACGAGGCC-GGTGTTGGGCGCGGC-----
-----AGCTCGC-----CCGGCTCGAAATTCACTGGCGG-
CCCGTTGCGGCGACCTCTGCGTAGTAA---CTCGCACTGG-G-
CAGCAGCGCGGCCACGCCGTAAAACCCCCGAC--T-----
AAGGTTGACCTCGAATCAGGTAGGACTACCCGCTGAACCTAACGATATCAAT--CGGAGG-----

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>KU746706.1 Simplicillium calcicola strain LC5586 internal transcribed spacer 1, partial sequence; 5.8S ribosomal RNA gene and internal transcribed spacer 2, complete sequence; and 28S ribosomal RNA gene, partial sequence

-----ACTCCC-CCCTTGTA-C--ACC--TTA--CGTT-
GCTCGGGCG--G-CGC-----CGGGTCAACGCC-T-----TAAACTC--CGAAA-----
---TCTGAGTGG---
CAATGAATCAAAACTTCAACAACGGATCTTGGTTCTGGCATCGATGAAGAACGCAGCAAATGCGA
TAAGTAATGTGAATTGCAGAATTCACTGAATCATCGAATCTTGAACGCACATTGCGCCCCGCCAGCAT
CTGGCGGGCATGCCTGTTGAGCGTCATTCAACCCCTGACGAGGCC-GGTGTTGGGCGCGGC-----

-----AGCTCGC-----CCGGCTCCGAAATCTAGTGGCGG-
CCCGTTGGCGACCTCTGCGTAGTAA---TCGCACTGG-G-
CAGCAGCGCGGCCACGCCGTAAAACCCCCGAC-----
AAGGTTGACCTCGAACATCAGGTAGGACTACCCGCTGAACCTAACGCATATC-----

>AB378533.1 Simplicillium lamellicola genes for 18S rRNA, ITS1, 5.8S rRNA, ITS2, 28S rRNA, partial and complete sequence, isolate: KYK00006

-----CGTTGGTAACCAGCGGATCATTAAC-GAG-ATCAACTCCCACCCCTTGTGAAC--
ACC--TTA--CGTT-GCTTCGGCG--G-CGC-----CAGGTCAACCGCG-C-----AAACTC--CGAAA-----
-----TCTGAGTGG-----
CAATGAATCAAACATTCAACAACGGATCTTGGTTCTGGCATCGATGAAGAACGCAGCAAAATGCGA
TAAGTAATGTGAATTGCAGAATTCACTCGAATCTTGAACGCACATTGCGCCGCCAGCATT
CTGGCGGGCATGCCCTGTCAGCGTCATTCAACCCCTGACGAAGCC-GGTGTTGGGGCGCGGC-----
-----AGCTCGC-----CCGGCTCCGAAATTAGTGGCGG-
CCCGTTGGCGACCTCTGCGTAGTAA---TCGCACTGG-G-
CAGCAGCGCGGCCACGCCGTAAAACCCCCGAC-----
AAGGTTGACCTCGAACATCAGGTAGGACTACCCGCTGAACCTAACGCATATCAAT--
CGGAGGAAAGAAACCAACAGGGATTGCCCCAGTAACGGCGAGTGAAAGCGGCAACAGCTCAAATTGA
AATCTGGCTCCTAGAGTCCGAATTGTAATTGCAAGAGGATGCTTTGATGCGGTGCCTCCGAGTTCCCT
GGAACGGGACGCCATAGAGGGTGAGAGGCCCTGCTGGTCGGATGCCAAATCTCTGAAAGCTCCTTCG
ACGAGTCGAGTAGTTGGGAATGCTGCTCTAAATGGGAGGTATATGCTCTAAAGCTAAATATTGCC
AGAGACCGATAGCGCACAAAGTAGAGTGATCGAAAGATGAAAAGCACTTGAAAAGAGGGTTAAAAG
TACGTGAAATTGTTGAAAGGGAAGCGCCTATGACCAGACTTGGGCCGGTGAATCATCCAGCGTTCTC
GCTGGTGCACTTGCCGGCACAGGCCAGCATCAGTTGCCTGGGGAAAAGGCTTGGAACGTA
GCTCCTCGGGAGTGTATAGACCATTGCATAATACCTGGGGCGGACTGAGGTTCGCGCATCTGCAA
GGATGCTGGCGTAATGGTCATCAG-

>AF108471.1 Simplicillium lamellicola isolate UAMH 2055 internal transcribed spacer 1, complete sequence

-----CATTAAC-GAG-ATCAACTCCCACCCCTTGTGAAC--ACC--TTA--
CGTT-GCTTCGGCG--G-CGC-----CAGGTCAACCGCG-C-----AAACTC--CGAAA-----
-----TCTGAGTGG-----
CAATGAATCAAACATTCAACAACGGATCTTGGTTCTGGCATCGATGAAGAACGCAGCAAAATGCGA
TAAGTAATGTGAATTGCAGAATTCACTCGAATCTTGAACGCACATTGCGCCGCCAGCATT
CTGGCGGGCATGCCCTGTCAGCGTCATTCAACCCCTGACGAAGCC-GGTGTTGGGGCGCGGC-----
-----AGCTCGC-----CCGGCTCCGAAATTAGTGGCGG-
CCCGTTGGCGACCTCTGCGTAGTAA---TCGCACTGG-G-
CAGCAGCGCGGCCACGCCGTAAAACCCCCGAC-----
AAGGTTGACCTCGAACATCAGGTAGGACTACCCGCTGAACCTAACGCATATCAAT--CGGAGG-----

>AF108480.1 Simplicillium lamellicola isolate UAMH 4785 internal transcribed spacer 1, complete sequence

CATTAAC-GAG-ATCAACTCCCACCCTTGTGAAC--ACC--TTA--
CGTT-GCTTCGGCG--G-CGC-----CAGGTCAACGCG-C-----AAACTC--CGAAA-----
-----TCTGAGTGG---
CAATGAATCAAACCAACGGATCTTGGTTCTGGCATCGATGAAGAACGCAGCAAATGCGA
TAAGTAATGTGAATTGCAGAATTCACTGAATCATCGAACATTGCGCCGCCAGCATT
CTGGCGGGCATGCCTGTTGAGCGTCATTCAACCTCGACGAAGCC-GGTGTTGGGGCGCGGC-----
-----AGCTCGC-----CCGGCTCCGAAATTAGTGGCGG-
CCCGTTGCGGCGACCTCTGCGTAGTAA---TCGCACTGG-G-
CAGCAGCGCGGCCACGCCGTAAAACCCCCGAC-----
AAGGTTGACCTCGAATCAGGTAGGACTACCCGCTGAACCTAACATATCAAT--CGGAGG-----

>MH979338.1 Simplicillium sp. RVO-2018a culture URM<BRA_:7918 small subunit ribosomal RNA gene, partial sequence; internal transcribed spacer 1, 5.8S ribosomal RNA gene, and internal transcribed spacer 2, complete sequence; and large subunit ribosomal RNA gene, partial sequence

-----GAACCTGCGGATCATTATC-GAGTATCAACTCCCACCCTATGTGAA--ACC--
TT---GTT-GCTTCGGCG--G-CGC-----AAACTCCT-----
---CTGAGTGG---
CAATGAATCAAACCAACGGATCTTGGTTCTGGCATCGATGAAGAACGCAGCGAAATGCG
ATAAGTAATGTGAATTGCAGAATTCACTGAATCATCGAACATTGCGCCGCCAGCATT
TCTGGCGGGCATGCCTGTTGAGCGTCATTCAACCTCGGG---CC-GGCGTTGGGGACCGGC-----
-----ACTGCC-----GACG---CCGCCCCGAAATTCACTGGCGG-
CCCTTCGAGGCGACCTCTGCGTAGTAA---TCGCACTGG-
GAAATCGAAGCGGCCACGCCGTAAAACACCCAAA-----
CAGGTTGACCTCGAATCAGGTAGGACTACCCGCTGAACCTAAC-----

>MF066034.1 Simplicillium sp. AMG-2017a isolate CDA_734 internal transcribed spacer 1, partial sequence; 5.8S ribosomal RNA gene and internal transcribed spacer 2, complete sequence; and large subunit ribosomal RNA gene, partial sequence

-----GAACCTGCGGATCATTATC-GAGTATCAACTCCCACCCTATGTGAA--ACC--
TT---GTT-GCTTCGGCG--G-CGC-----AAACTC-----
---CTGAGTGG---
CAATGAATCAAACCAACGGATCTTGGTTCTGGCATCGATGAAGAACGCAGCGAAATGCG

ATAAGTAATGTGAATTGCAGAATTCACTGAATCATCGAACATTGCGCCGCCAGTAT
TCTGGCGGGCATGCCTGTTGAGCGTCATTCAACCCCTCGAG---CC-GGCGTTGGGGACCGGC-----
-----ACTGCC-----GACG---CCGCCCCCGAAATTAGTGGCGG-
CCCTCTGAGGCACCTCTGCGTAGTAA---TCGCACTGG-
AACATTAGAGTGGCCACGCCGTAAAACACCCAACCT-----
CAGGTTGACCTCGAACATCAGGTAGGACTACCCGCTGAACCTAAC-----

>MF066035.1 Simplicillium sp. AMG-2017a isolate CDA_735 internal transcribed spacer 1, partial sequence; 5.8S ribosomal RNA gene and internal transcribed spacer 2, complete sequence; and large subunit ribosomal RNA gene, partial sequence

-----GCGGATCATTATC-GAGTATCAACTCCCACCCTATGTGAA---ACC--TT--
--GTT-GCTTCGGCG--G-CGC-----AAACTC-----
CTGAGTGG---
CAATGAATCAAACCTTCAACAACGGATCTCTGGTTCTGGCATCGATGAAGAACGCAGCGAAATGCG
ATAAGTAATGTGAATTGCAGAATTCACTGAATCATCGAACATTGCGCCGCCAGTAT
TCTGGCGGGCATGCCTGTTGAGCGTCATTCAACCCCTCGAG---CC-GGCGTTGGGGACCGGC-----
-----ACTGCC-----GACG---CCGCCCCCGAAATTAGTGGCGG-
CCCTCTGAGGCACCTCTGCGTAGTAA---TCGCACTGG-
AACATTAGAGTGGCCACGCCGTAAAACACCCAACCT-----
CAGGTTGACCTCGAACATCAGGTAGGACTACCCGCTGAACCTAAC-----

>JQ410324.1 Simplicillium chinense strain LC1345 internal transcribed spacer 1, partial sequence; 5.8S ribosomal RNA gene and internal transcribed spacer 2, complete sequence; and 28S ribosomal RNA gene, partial sequence

-----ACC--TT---GTT-GCTTCGGCGC-G-
CGC-----C-AAACTC-----A-----CTGAGTGG-T-
CAATGAATCAAACCTTCAACAACGGATCTCTGGTTCTGGCATCGATGAAGAACGCAGCGAAATGCG
ATAAGTAATGTGAATTGCAGAATTCACTGAATCATCGAACATTGCGCCGCCAGCAT
TCTGGCGGGCATGCCTGTTGAGCGTCATTCAACCCCTCGAG---TC-GGCGTTGGGGACGGC-----
-----ACTCCC-----GACG---CCGCCCCCGAAATCTAGTGGCGG-
CCCTCCGAGGCACCTCTGCGTAGTAA---TCGCACCGG-AAGCTCAGAGCGGCCACGCCGTAAAAC-
CCCAAC-----CAGGTTGACCTCGAACATCAGGTAGGACTACCCGCTGAACCTAAC-----

>JQ410323.1 Simplicillium chinense strain LC1342 18S ribosomal RNA gene, partial sequence; internal transcribed spacer 1, 5.8S ribosomal RNA gene, and internal transcribed spacer 2, complete sequence; and 28S ribosomal RNA gene, partial sequence

-----GTAAAAGTCGTAACAAGGTTCCGGTGAACCAGCGGATCATTATC-GAG-
ATCAACTCCCACCCATGTGAA---ACC--TT---GTT-GCTTCGGCGC-G-CGC-----
--C-AAACTC-----A-----CTGAGTGG-T-
CAATGAATCAAACCAACGGATCTCTGGTTCTGGCATCGATGAAGAACGCAGCGAAATGCG
ATAAGTAATGTGAATTGCAGAATTCACTGATCGAATCATCGAATCTTGACACATTGCGCCCCGCCAGCAT
TCTGGCGGGCATGCCTGTTGAGCGTCATTCAACCCTCGAG---TC-GGC GTTGGGGGACGGC-----
-----ACTCCC-----GACG---CCGCCCCCGAAATCTAGTGGCGG-
CCCTCCGAGGC GACCTCTGCGTAGTAA---TCGCACCGG-AAGCTCAGAGCGGCCACGCCGTAAAAC-
CCCAAC-----CAGG-TGACCTCGAATCA-----

>KP034998.1 Simplicillium chinense strain EXF-8701 18S ribosomal RNA gene, partial sequence; internal transcribed spacer 1 and 5.8S ribosomal RNA gene, complete sequence; and internal transcribed spacer 2, partial sequence

-----GTAACAAGGTTCCGGTGAACCAGCGGATCATTATC-GAG-
ATCAACTCCCACCCATGTGAA---ACC--TT---GTT-GCTTCGGCGC-G-CGC-----
--C-AAACTC-----A-----CTGAGTGG-T-
CAATGAATCAAACCAACGGATCTCTGGTTCTGGCATCGATGAAGAACGCAGCGAAATGCG
ATAAGTAATGTGAATTGCAGAATTCACTGATCGAATCATCGAATCTTGACACATTGCGCCCCGCCAGCAT
TCTGGCGGGCATGCCTGTTGAGCGTCATTCAACCCTCGAG---TC-GGC GTTGGGGGACGGC-----
-----ACTCCC-----GACG---CCGCCCCCGAAATCTAGTGGCGG-
CCCTCCGAGGC GACCTCTGCGTAGTAA---TCGCACCGG-AAGCTCAGAGCGGCCACGCCGTAAAAC-
CCCAA-----

